

WHAT IS CLAIMED IS:

1. A portable communication device for communicating with a remote communication terminal, comprising:
- a remote communication interface
 - 10 interfacing radio-frequency communication with a remote communication terminal;
 - a short-distance communication interface interfacing wireless communication with a communication terminal located in the vicinity of
 - 15 the portable communication device;
 - inputting unit inputting data or instruction information to said portable communication terminal;
 - a memory storing the data input by the
 - 20 inputting unit or data received via said remote communication interface and said short-distance communication interface;
 - a display unit displaying the data input by said inputting unit or data received via said
 - 25 remote communication interface and said short distance communication interface;
 - an enciphering circuit enciphering data to be transmitted to the remote communication terminal via said remote communication interface and data to
 - 30 be transmitted via said short-distance communication interface;
 - a deciphering circuit deciphering data received from the remote communication terminal via said remote communication interface and data
 - 35 received via said short-distance communication interface; and
 - a controlling unit controlling each of

said remote communication interface, said short-distance communication interface, said inputting unit, said memory, said display unit, said enciphering circuit and said deciphering circuit.

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2. The portable communication device as claimed in claim 1, wherein said inputting unit includes at least one of voice inputting device and an operational key panel.

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3. The portable communication device as claimed in claim 1, wherein said enciphering circuit and deciphering circuit are constituted by an enciphering/deciphering processor, and an enciphering and deciphering method used by said enciphering/deciphering processor is changed by changing software installed in said enciphering/deciphering processor.

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4. A digital money system for using digital money to pay for purchase or service, comprising:

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a computer of a financial institution;
a radio base station communicable with said computer of the financial institution;
a store terminal receiving digital money data for payment; and
a portable communication device

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communicable with said radio base station via a radio frequency, said portable communication device also communicable with said store terminal in a wireless manner; and

5 wherein said portable communication device stores the digital money data transmitted from said computer of the financial institution after deciphering the digital money data; and

 said portable communication device
10 transmits the digital money data for payment to said store terminal after enciphering the digital money data for payment.

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5. The digital money system as claimed in claim 4 wherein said portable communication device comprises:

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a remote communication interface interfacing radio-frequency communication with said radio base station;

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a short-distance communication interface interfacing wireless communication with said store terminal located in the vicinity of said portable communication device;

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inputting unit inputting data or instruction information to said portable communication terminal;

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a memory storing the data input by the inputting unit or data received via said remote communication interface and said short-distance communication interface;

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a display unit displaying the data input by said inputting unit or data received via said remote communication interface and said short distance communication interface;

an enciphering circuit enciphering data to be transmitted to said computer of the financial institution via said remote communication interface and data to be transmitted to said store terminal via said short-distance communication interface;

a deciphering circuit deciphering data received from said computer of the financial institution via said remote communication interface and data received from said store terminal via said short-distance communication interface; and

a controlling unit controlling each of said remote communication interface, said short-distance communication interface, said inputting unit, said memory, said display unit, said enciphering circuit and said deciphering circuit.

6. The digital money system as claimed in claim 4, wherein said store terminal includes customer information storing means for storing information regarding a customer so that, when the customer make a payment by the digital money via said store terminal, said store terminal stores information regarding the payment in said customer information storing means, the information regarding the payment includes information regarding an item for which the payment is made, an amount of payment and date and time of the payment, and said store terminal transmits the information regarding the payment to said portable communication device together with store information to said short-distance communication interface of said portable communication device.

5 6. The digital money system as claimed in claim 5, wherein said portable communication device receives the information regarding the payment via said short-distance communication interface, and stores the information regarding the payment in said memory.

10 6 7. The digital money system as claimed in 7, wherein said portable communication device displays at least a part of the information regarding the payment on said display unit.

15 7 8. The digital money system as claimed in 8, wherein said portable communication device sends a request for service to said store terminal via said short-distance communication interface when an amount of payment or points exceeds a predetermined level, and said store terminal determines whether use of the digital money by said portable communication device satisfies a predetermined requirement so as to transmit digital data corresponding the requested service to said portable communication device when the use of the digital money by said portable communication device satisfies the predetermined requirement.

35 9 10. The digital money system as claimed in claim 7, wherein said portable communication

device sends the information regarding the payment to said computer of the financial institution via said remote communication interface and said radio base station, and said computer of said financial institution produces a household account book based on the information regarding the payment sent from said portable communication device by using household account book software installed in said computer of the financial institution.

10 11. The digital money system as claimed in claim 10, wherein said computer of the financial institution sends data corresponding to the household account book to a communication terminal of a user of said portable communication device so that the household account book is displayed on a computer or a television set connected to the communication terminal periodically or upon a request by the user.

25 12. A computer of a financial institution included in a digital money system handling digital money, the digital money system including a radio base station connected to a computer of the financial institution and a portable communication device communicable with said radio base station, said computer of a financial institution comprising:
30 voice guiding means for providing a voice guidance to a user of the digital money system;
35 user checking means for checking whether or not the user has a right to use the digital money

system;

enciphering means for enciphering data to be transmitted;

deciphering means for deciphering data
5 received from said portable communication device;
and

communicating means for communicating with said portable communication device via said radio base station,

10 wherein said computer of the financial institution provides to the user a voice guidance by said voice guiding means by receiving signals regarding digital transaction from said portable communication device via said communicating means;

15 said computer of the financial institution receives enciphered information including customer information and information regarding amount of money from said portable communication device, and deciphers the enciphered information by said
20 deciphering means;

said computer of the financial institution checks whether the user has the right to use the digital money system by said user checking means based on the received customer information; and

25 said computer of the financial institution enciphers digital money data input by the user by said enciphering means when the user is determined to have the right to use the digital money system, and sends the enciphered digital money data to said
30 portable communication device via said communicating means.

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13. A service providing system comprising:

a service provider terminal of a provider of service;

5 a service center including service information storing means for storing information including information regarding various kinds of service which can be provided to a user, information regarding availability of service provided by the provider and information regarding message to be provided to the user, said service center also
10 including determining means for determining whether or not service can be provided to the user based on a present state of the user;

a radio base station connected to said service center; and

15 a portable communication device comprising remote communication means for communication with said radio base station, said portable communication device also comprising inputting means for inputting information regarding a present state of the user,

20 wherein said portable communication device sends the information regarding the present state of the user to said service center by said remote communication means when the information regarding the present state of the user is input by said
25 inputting means; and

said service center determines whether or not there is service which can be provided to the user by said determining means when said service center receives the information regarding the
30 present state of the user, and sends the message stored in said service information storing means to said portable communication device when the service which can be provided to the user is present.

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12 14. The service providing system as
claimed in claim 13¹¹, wherein said portable
communication device has a specific key for
inputting the present state of the user so that the
5 user can input information regarding the present
state of the user by pressing the specific key.

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13 15. The service providing system as
claimed in claim 13¹¹, wherein said radio base station
is installed at a plurality of locations so that a
position of said portable communication device is
15 determined by exchanging signals between said
portable communication device and said radio base
station, and said determining means determines
whether or not there is service which can be
provided to the user based on positional information
20 of said portable communication device.

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14 16. The service providing system as
claimed in claim 13¹¹, wherein said portable
communication device further comprises short-
distance communication means for communicating with
said service provider terminal and storing means for
30 storing user information, and wherein said portable
communication device sends the user information
stored in said storing means to said service
provider terminal when said portable communication
device receives a message to the user from said
35 service center.

15 17. The service providing system as
claimed in claim 16,¹⁴ wherein said portable
communication device receives the message to the
user from said service provider terminal and outputs
5 the message by voice so that the user sends the user
information stored in said storing means to said
service provider terminal via said short-distance
communication means so as to make a reservation
after hearing the voice message.

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16 18. The service providing system as
15 claimed in claim 13,¹¹ wherein said service center
further comprises:

temporary telephone number setting and
announcing means for setting a temporary telephone
number to the service and announcing the temporary
20 telephone number to a telephone station when service
provided by said provider is time limited service;
and

temporary telephone number canceling means
for canceling the temporary telephone number when
25 the service is completed,

wherein said service center provides
information to said portable communication device by
using the temporary telephone number, and cancels
the temporary telephone number by said temporary
30 telephone number canceling means when the service is
completed.

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17 19. The service providing system as
claimed in claim 18,¹⁶ wherein said provider of

service sets the same temporary telephone number to each portable communication device when the same service is provided to each portable communication device.

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20. A portable telephone attachment
10 adapted to be connected to a portable telephone
having a first external connector, comprising:
a second external connector connectable to
the first external connector of said portable
telephone; and
15 an arithmetic unit performing a digital
process,
wherein said portable telephone attachment
exchanges signals with said portable telephone via
said second external connector, and said arithmetic
20 unit sends a control signal to said portable
telephone via said second connector so as to control
an inputting and outputting unit of said portable
telephone.

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21. A portable telephone attachment
adapted to be connected to a portable telephone
30 having a first external connector, comprising:
a second external connector connectable to
the first external connector of said portable
telephone;
a central processing unit; and
35 an enciphering and deciphering unit
enciphering or deciphering data provided by said
central processing unit and returning the enciphered

or deciphered data to said central processing unit,
wherein said central processing unit
exchanges signals with said portable telephone via
said second external connector, and said enciphering
5 and deciphering unit deciphers data received by said
portable telephone and enciphers data to be
transmitted from said portable telephone.

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22. The portable telephone attachment as
claimed in claim 21, further comprising
data/information storing means for storing data and
15 information and short-distance communication means
for communicating with a communication terminal
located in the vicinity of said portable telephone
in a wireless manner,

wherein said central processing unit is
20 accessible to said data/information storing means;

data received by said portable telephone
is sent to said portable telephone attachment via
said second external connector, and stored in said
data/information storing means by said central
25 processing unit; and

the data or information stored in said
data/information storing means is transmitted to the
communication terminal located in the vicinity of
said portable telephone via said short-distance
30 communication means upon a request made by said
communication terminal.

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23. The portable telephone attachment as
claimed in claim 22, wherein an application program

for operating said portable telephone attachment is stored in said data/information storing means, and the application program can be downloaded from an external terminal via said second external connector.

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24. A portable telephone attachment
10 adapted to be connected to a portable telephone having a first external connector, comprising:
a second external connector connectable to the first external connector of said portable telephone;
15 a central processing unit;
an enciphering and deciphering unit enciphering or deciphering data provided by said central processing unit and returning the enciphered or deciphered data to said central processing unit;
20 data/information storing means for storing data and information; and
short-distance communication means for communicating with a communication terminal located in the vicinity of said portable telephone in a
25 wireless manner,
wherein said central processing unit exchanges signals with said portable telephone via said second external connector, and is accessible to said data/information storing means;
30 said central processing unit transmits control signals to said portable telephone via said second external connector so as to control an inputting and outputting unit of said portable telephone, and data received by said portable
35 telephone is sent to said portable telephone attachment via said second external connector, and stored in said data/information storing means by

said central processing unit;

the data or information stored in said data/information storing means is transmitted to the communication terminal located in the vicinity of said portable telephone via said short-distance communication means upon a request made by said communication terminal; and

said enciphering and deciphering unit deciphers data received by said portable telephone and enciphers data to be transmitted from said portable telephone.

25. The portable telephone attachment as claimed in claim 24, wherein an application program for operating said portable telephone attachment is stored in said data/information storing means, and the application program can be downloaded from an external terminal via said second external connector.

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